

**REMARKS**

**41.202(a)(1)**

Applicant hereby seeks an interference with Application Serial No. 09/738,147 (“the ‘147 application”) (Application Publication No. 20020007122) entitled “Methods for diagnosing disease” filed on December 15, 2000.

**41.202(a)(2)**

Applicant respectfully submits that claims 17-22 of the present application interfere with claims 18, 19, 21, 27, 30 and 31 of the ‘147 application.

Applicant proposes count 1 and count 2 herein, which are identical to independent claims 17 and 20, respectively, of the present application. Dependent claims 18-19 of the present application correspond to proposed count 1; and dependent claims 21-22 of the present application correspond to proposed count 2.

**Proposed Count 1:**

A method of diagnosing disease in a subject, comprising:  
applying a pathology differentiating agent on a tissue;  
providing an automated triggering signal to initiate a measurement period relative to said applying step;  
measuring a temporal evolution of an optical signal observed from said tissue during said measurement period; and  
providing a diagnosis based upon said temporal evolution.

**Proposed Count 2:**

A method for diagnosing disease in a subject, comprising:  
dispensing a pathology differentiating agent on a tissue;  
capturing a plurality of sequential images of said tissue during a measurement period;  
aligning a subset of said plurality of images to spatially correlate said subset;  
measuring a temporal evolution of an optical signal from said subset of spatially correlated images; and  
providing a diagnosis based on said temporal evolution.

**41.202(a)(3)**

37 C.F.R. §41.203 provides that “[a]n interference exists if the subject matter of a claim of one party would, if prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing party and vice versa.”

Proposed count 1 is identical to independent claim 17 of the present application. It is Applicant’s position that independent claim 18, and claims 19 and 21 which depend therefrom, of the ‘147 application interfere with proposed count 1 within the meaning of §41.203(a). In particular, the subject matter of claim 17 of the present application, as prior art, would anticipate and render obvious the subject matter of claim 18, and claims depending therefrom, of the ‘147 application and vice versa.

Specifically, claim 18 of the ‘147 application and proposed count 1 are directed to the same method and essentially recite the same steps. With respect to the first step of claim 18 and the first step of proposed count 1, Applicant contends that the term “applying” (as recited in proposed count 1 and claim 17 of the present application) and the term “dispensing” (as recited in claim 18 of the ‘147 application) have the same ordinary meaning within the art. Both specifications use these terms in the context of applying or dispensing an agent.

Furthermore, a “pathology differentiating agent” (as recited in proposed count 1 and in claim 17 of the present application) and “a chemical agent” (as recited in claim 18 of the ‘147 application), as described in the respective specifications, also have the same meaning. These terms, as used in the respective specifications, refer to agents that interact with tissue and alter the characteristics of the light or optical signal that is re-emitted from the tissue. For example, the present application defines a “pathology differentiating agent” as “an agent or a combination of agents which interact with pathologic tissue areas characterized by an altered biochemical composition and/or cellular functionality and provoke a transient alteration in the characteristics of the light that is re-emitted from the tissue” (see page 7, lines 17-21 of the present application). Applicant also describes a “pathology differentiating agent” as, for example, “an acetic acid solution or a combination of solutions selected from a plurality of acidic and basic solutions” (see page 7, lines 6-10 of the present application). Similarly, the ‘147 application describes “chemical agents” as “agents that interact to alter an optical signal from the sample” and also

cites acetic acid as an example of such an agent (§0007 of Application Publication No. 20020007122).

The second, third and fourth steps of claim 18 and proposed count 1 are identical.

<b>Proposed Count 1</b>	<b>Claim 17 from the present application is identical to Proposed Count 1</b>	<b>Claim 18 from the '147 application corresponding to Proposed Count 1</b>	<b>Comparison of Claim 17 and Claim 18</b>
<p>A method of diagnosing disease in a subject, comprising:</p> <p>applying a pathology differentiating agent on a tissue;</p> <p>providing an automated triggering signal to initiate a measurement period relative to said applying step;</p> <p>measuring a temporal evolution of an optical signal observed from said tissue during said measurement period; and</p> <p>providing a diagnosis based upon said temporal evolution.</p>	<p>A method of diagnosing disease in a subject, comprising:</p> <p><b>applying a pathology differentiating agent</b> on a tissue;</p> <p>providing an automated triggering signal to initiate a measurement period relative to said applying step;</p> <p>measuring a temporal evolution of an optical signal observed from said tissue during said measurement period; and</p> <p>providing a diagnosis based upon said temporal evolution.</p>	<p>A method of diagnosing disease in a patient, the method comprising the steps of</p> <p><b>dispensing a chemical agent</b> on a tissue,</p> <p>providing an automated triggering signal to initiate a measurement period relative to said dispensing step,</p> <p>measuring a temporal evolution of an optical signal observed from said tissue during said measurement period,</p> <p>providing a diagnosis based upon said temporal evolution.</p>	<p>Same method of diagnosis</p> <p>First step: The terms “applying” and “dispensing” have the same meaning in the art. A “pathology differentiating agent” and a “chemical agent” have the same meaning based on the teachings in both specifications.</p> <p>Second step: Identical step</p> <p>Third step: Identical step</p> <p>Fourth step: Identical step</p>

Proposed count 2 is identical to independent claim 20 of the present application. It is Applicant's position that independent claim 27, and claims 30-31 which depend therefrom, of the '147 application interfere with proposed count 2 within the meaning of §41.203(a), because the subject matter of claim 20 of the present application, as prior art, would anticipate and render

obvious the subject matter of claim 27, and claims depending therefrom, of the '147 application and vice versa.

Specifically, claim 18 of the '147 application and proposed count 2 are directed to the same method and essentially recite the same steps. With respect to the first step of claim 18 and proposed count 2, Applicant contends the term a "pathology differentiating agent" (as recited in proposed count 2 and in claim 17 of the present application) and "a chemical agent" (as recited in claim 18 of the '147 application), as described in the respective specifications, have the same meaning. As set forth in detail above, these terms, as used in the specifications, refer to agents that interact with tissue and alter the characteristics of the light or optical signal that is re-emitted from the tissue.

The second, third, fourth and fifth steps of claim 18 and proposed count 2 are identical.

<b>Proposed Count 2</b>	<b>Claim 20 from the present application is identical to Proposed Count 2</b>	<b>Claim 27 from the '147 application corresponds to Proposed Count 1</b>	<b>Comparison of Claim 20 and Claim 27</b>
<p>A method for diagnosing disease in a subject, comprising:</p> <p>dispensing a pathology differentiating agent on a tissue;</p> <p>capturing a plurality of sequential images of said tissue during a measurement period;</p> <p>aligning a subset of said plurality of images to spatially correlate said subset;</p> <p>measuring a temporal evolution of an optical signal from said subset of spatially correlated images; and</p>	<p>A method for diagnosing disease in a subject, comprising:</p> <p>dispensing a <b>pathology differentiating agent</b> on a tissue;</p> <p>capturing a plurality of sequential images of said tissue during a measurement period;</p> <p>aligning a subset of said plurality of images to spatially correlate said subset;</p> <p>measuring a temporal evolution of an optical signal from said subset of spatially correlated images; and</p>	<p>A method for diagnosing disease in a patient, the method comprising the steps of:</p> <p>dispensing a <b>chemical agent</b> on a tissue,</p> <p>capturing a plurality of sequential images of said tissue during a measurement period,</p> <p>aligning a subset of said plurality of images to spatially correlate said subset,</p> <p>measuring a temporal evolution of an optical signal from said subset of spatially correlated images, and</p>	<p>Same method of diagnosis</p> <p>First step: A "pathology differentiating agent" and a "chemical agent" have the same meaning based on the teachings in both specifications.</p> <p>Second step: Identical step</p> <p>Third step: Identical step</p> <p>Fourth step: Identical step</p>

providing a diagnosis based on said temporal evolution.	providing a diagnosis based on said temporal evolution.	providing a diagnosis based on said temporal evolution.	Fifth step: Identical step
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**41.202(a)(4)**

The present application claims priority to and is entitled to, at least, a filing date of March 28, 2000 (Greek Application No. 20000/00102, entitled "*Method And Apparatus For Amplifying Pathological Features In Tissues*").

Applicant can prove that he completed the invention as described and claimed, in this country, a NAFTA country, or a WTO country, prior to December 15, 1999.

Moreover, as indicated in the Amendment and Response of January 3, 2003, Applicant submits that he is the first to invent the presently claimed subject matter, as evidenced by the plethora of publications made by the Applicant in this field (see, for example, the *Journal of Photochemistry and Photobiology* article submitted by Applicant on November 25, 2002). Applicant's publications prompted the company Medispectra (the employer of Applicants of the '147 application) to contact Applicant seeking more information on the technology. A business relationship ensued and an agreement was reached under which Applicant provided Medispectra with confidential information pertaining to the technology that is the subject of the present application and claims, *i.e.*, the detection, staging and mapping of neoplasias, based on the quantitative assessment of acetic acid-tissue interaction kinetics. It is Applicant's belief that based on the foregoing confidential information provided by the Applicant of the instant application, the Applicants of the '147 application (employed at Medispectra) filed the '147 application.

**41.202(a)(5)**

Claims 17-22 were added by a Preliminary Amendment on February 12, 2003 to provoke an interference. Support for claims 17-22 is set forth in the Table below.

<b>Claim</b>	<b>Description in Specification</b>
17	Page 13, lines 12-14; page 13, line 32 through page 14, line 6; and page 17, lines 29-37 of the specification.
18	Page 11, lines 14-16 and page 17, lines 29-37 of the specification.
19	Page 17, lines 29-37; page 13, line 33 through page 14, line 6 of the specification and Figure 1.
20	Page 13, line 32 through page 14, line 6 and Figure 1 of the specification.
21	Page 17, lines 29-37 and page 13, line 32 through page 14, line 6 of the specification.
22	Page 6, lines 31-32 and page 18, line 2 of the specification.

**41.202(a)(6)**

The following Table indicates support in the specification for each constructive reduction to practice within the scope of the interfering subject matter.

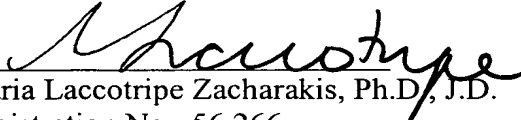
<b>Claim</b>	<b>Description in Specification</b>
17	Page 13, lines 12-14; page 13, line 32 through page 14, line 6; and page 17, lines 29-37 of the specification.
18	Page 11, lines 14-16 and page 17, lines 29-37 of the specification.
19	Page 17, lines 29-37; page 13, line 33 through page 14, line 6 of the specification and Figure 1.
20	Page 13, line 32 through page 14, line 6 and Figure 1 of the specification.
21	Page 17, lines 29-37 and page 13, line 32 through page 14, line 6 of the specification.
22	Page 6, lines 31-32 and page 18, line 2 of the specification.

**CONCLUSION**

In view of the above, Applicant respectfully requests that an interference be declared between the present application and the '147 application.

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Respectfully submitted,

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